

UMASS/AMHERST



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# Operating Cost Prototypes

## Study for the Development of Day Care Centers in State Facilities

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# Operating Cost Prototypes

The following day care center operating cost prototypes are based on five day care scenarios: MODEL I, MODEL II, SCHOOL AGE CHILDREN ADDED, DOUBLE SHIFT, and DOUBLE MODULE. These scenarios are similar to those on which the CENTER PROTOTYPES are based. The latter three scenarios are based on the staffing requirements and lower pay scale of MODEL I, but make adjustments as required.

In general, salary levels were determined by those set in the Final Report of the Governor's Day Care Partnership Project. Payroll taxes and benefits were set at 25%. These are Boston rates and should be adjusted to other regions as necessary. Salaries for personnel other than those directly related to day care (i.e. bookkeepers, secretaries, etc.) were determined by market rates.

Staff levels are those defined by the Governor's Day Care Partnership Project (Levels are same as O.F.C. except: entry level = assistant teacher). Staffing Requirements are determined by the Office For Children. They are as follows: 7 infants - 1 teacher, 1 entry level (7.06 (11); 7.06 (1) (b)); 9 toddlers - 1 teacher, 1 entry level (7.06 (12); 7.06 (1) (b)); 20 preschoolers - 1 teacher, 1 entry level (7.06 (18)). In addition, one teacher must be designated head teacher. Beyond these requirements, staffing levels and shifts for an entire day care day must be considered. These are best depicted by the charts accompanying each scenario.

The day care centers within the scope of this study are meant to be inserted into large state facilities.

Rent, maintenance, fuel, and other facilities costs are assumed to be paid for by the host institution and do not apply to these prototypes.

Insurance costs are difficult to determine accurately. In light of current liability issues and a trend towards greater problems in the future, there is great uncertainty over insurance costs. For this study, insurance is set at \$70/child/year for \$500,000 liability coverage (Source: H. Urich, GOHR).





One notable result common to all six operating scenarios is the high proportion of salaries and related costs (taxes and benefits) to total cost. These proportions range anywhere from 83-87%. Any appreciable change in non-salary costs (other than insurance) will minimally affect the total operating cost.

## Staff Scheduling

|                        | MODEL I | MODEL II | School Age Added | Double Shift | Double Module |
|------------------------|---------|----------|------------------|--------------|---------------|
| Infants:               |         |          |                  |              |               |
| Entry Level            | 1 1/4   | 1 1/4    | 1 1/4            | 1 1/4        | 2 1/2         |
| Teacher                | 1 1/3   | 1 1/3    | 1 1/3            | 1 1/3        | 2 2/3         |
| Head Teacher           | -       | -        | -                | -            | -             |
| Toddlers:              |         |          |                  |              |               |
| Entry Level            | 1 1/4   | 1 1/4    | 1 1/4            | 1 1/4        | 2 1/2         |
| Teacher                | 1 1/3   | 1 1/3    | 1 1/3            | 1 1/3        | 2 2/3         |
| Head Teacher           | -       | -        | -                | -            | -             |
| Pre Schoolers:         |         |          |                  |              |               |
| Entry Level            | 1 1/4   | 1 1/4    | 1 1/4            | 2            | 1 1/2         |
| Teacher                | 1/3     | 1/3      | 1/3              | 1 1/2        | 2/3           |
| Head Teacher           | 1       | 1        | 1                | 1            | 2             |
| After Schoolers:       |         |          | 1/2              |              |               |
| Director               |         | 1        | 1                | 1            | 1             |
| Bookkeeper             |         | 1/2      |                  | **           | **            |
| Secretary              |         | 1/2      |                  |              | 1             |
| Kitchen Help           |         |          |                  |              | 1/2           |
| Nurse                  |         |          |                  |              | 1/2           |
| * Substitutes          | 20%     | 20%      | 20%              | 20%          | 20%           |
| Payroll Tax & Benefits | 25%     | 25%      | 25%              | 25%          | 25%           |

\* assume a 20% percent replacement at entry level salary

\*\* this position appears as a cost under consultants



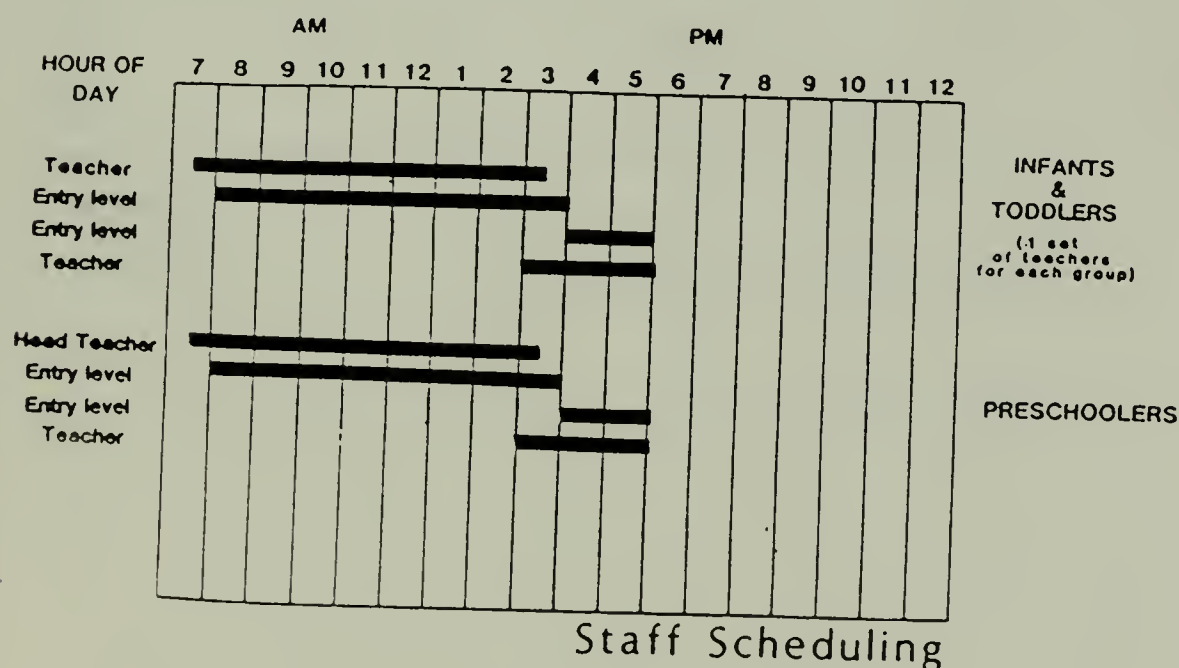
# MODEL I

## 36 Children

This day care scenario represents a baseline level of staffing and supplies while remaining within the guidelines set by the Office for Children. Centers with fewer than forty children are not required to have head teachers, nor a non-teaching director. (7.06 (10)(a)). This scenario will have the required number of teachers, one of whom is assumed to be teaching director at a head teacher salary level. Salaries should be market rate.

It will be noted that the figure for "consultants" is higher in this scenario than in that for Prototype II level care. It is assumed here that certain services provided by salaried positions (bookkeeper, etc.) which exist at a Prototype II level but not at Prototype I the level can be absorbed under the "consultants" line item. It might be possible for such services to be provided by parents or other donated labor.

Figures for various supplies represent best estimates for this level of care. Two figures need further elaboration. One, "diapers," does not appear at this level because it is assumed parents will provide these. Another, "food," is provided by both parents and center. The center will provide two snacks per child per day, while the parent provides all other food.







# MODEL 1

## Operating Costs

| SALARIES               | TOTAL                | INFANTS   | TODDLERS  | PRESCHOOL |
|------------------------|----------------------|-----------|-----------|-----------|
| Entry level Teachers   | 3 3/4 @ 11,340       | 1 1/4     | 1 1/4     | 1 1/4     |
| Head Teachers          | 3 @ 13,600           | 1 1/3     | 1 1/3     | 1 1/3     |
| Director               | 1 @ 15,875           |           |           | 1         |
| Bookkeeper             |                      |           |           |           |
| Secretary              |                      |           |           |           |
| Substitute             | 2,268                |           |           |           |
| Total                  | \$ 101,336           | \$ 32,265 | \$ 32,265 | \$ 34,538 |
| Payroll Tax & Benefits | \$ 25,334            | 8,070     | 8,070     | 8,635     |
| Total Payroll          | \$ 126,670           | \$ 40,335 | \$ 40,335 | \$ 43,173 |
| Consultants            | 2,000                |           |           |           |
| License & Fees         | 30                   |           |           |           |
| Insurance              | 36 @ \$70.00 = 2,520 |           |           |           |
| Educational Supplies   | 3,700                |           |           |           |
| Other Supplies         |                      |           |           |           |
| Paper                  | 1,250                |           |           |           |
| Maintenance            | 350                  |           |           |           |
| Office                 | 500                  |           |           |           |
| Medical                | 125                  |           |           |           |
| Kitchen                | 250                  |           |           |           |
| Diapers                | 950                  |           |           |           |
| Food                   | 12,000               |           |           |           |
| Staff Development      | 500                  |           |           |           |
| Miscellaneous          |                      |           |           |           |
| Printing               | 500                  |           |           |           |
| Postage                | 300                  |           |           |           |
| TOTAL                  | \$ 150,195           |           |           |           |

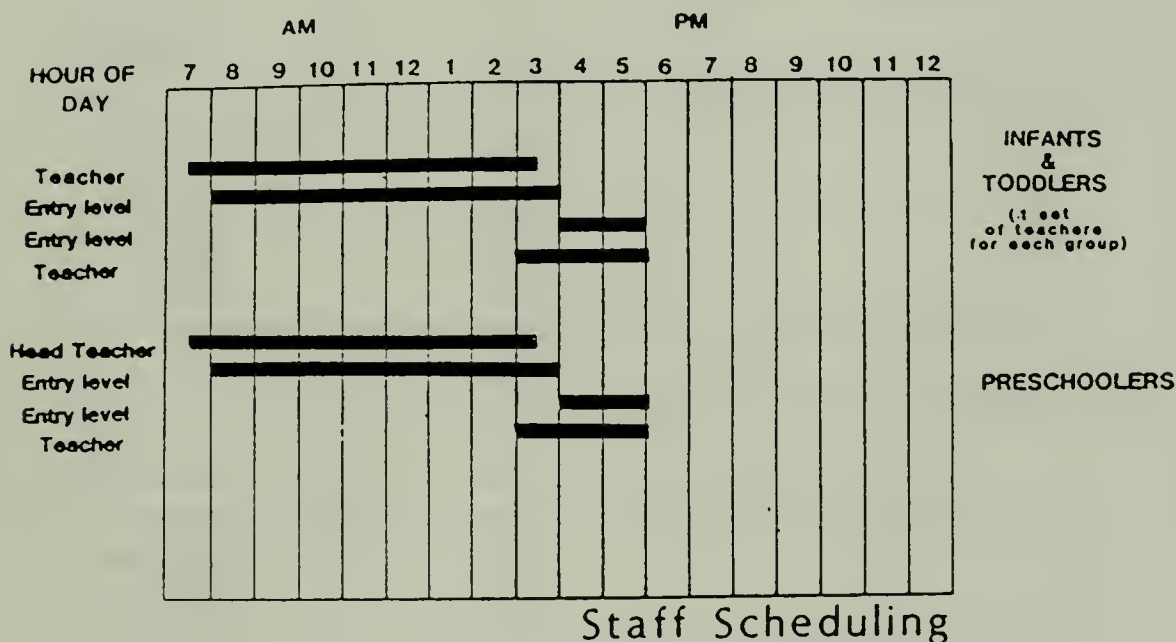


## MODEL II

36 Children

Model II is essentially Model I with the addition of administrative staff and an increase in salaries. A full-time, non-teaching director is added as well as half-time bookkeeper and secretary. The addition of the latter two positions lowers the figure for "consultants." Salary levels are now drawn from the higher levels found in the Governor's Day Care Partnership Project. Finally, while the number of teachers remains the same, the balance between entry level and teachers is shifted towards teachers.

In the area of supplies there are a few changes. All meals are supplied by the center. Diapers are now the responsibility of the center and appear as a cost. Educational supplies receive a larger sum commensurate with the level of care. Office supplies also increase in relation to the addition of administrative staff.



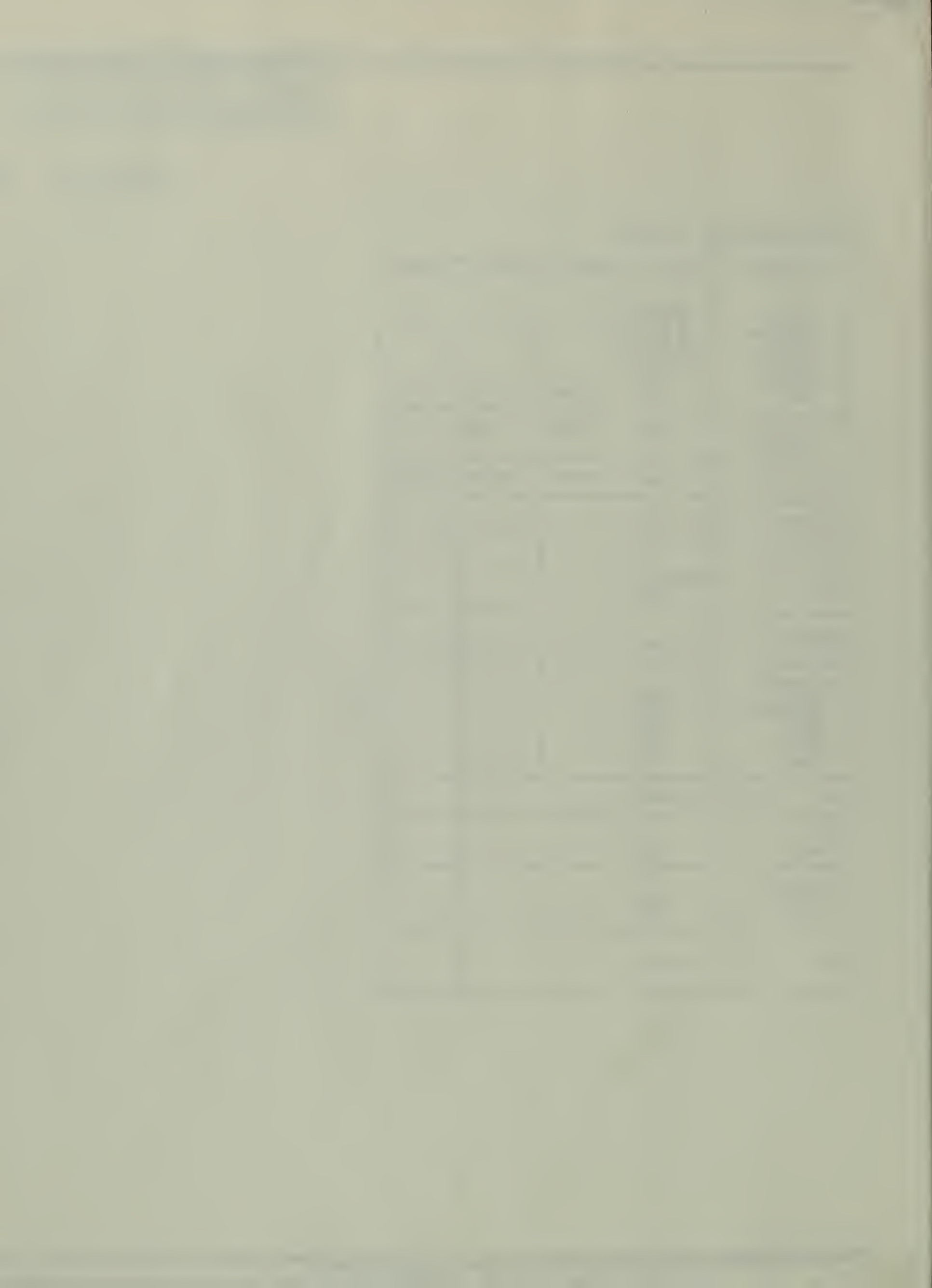




# MODEL II

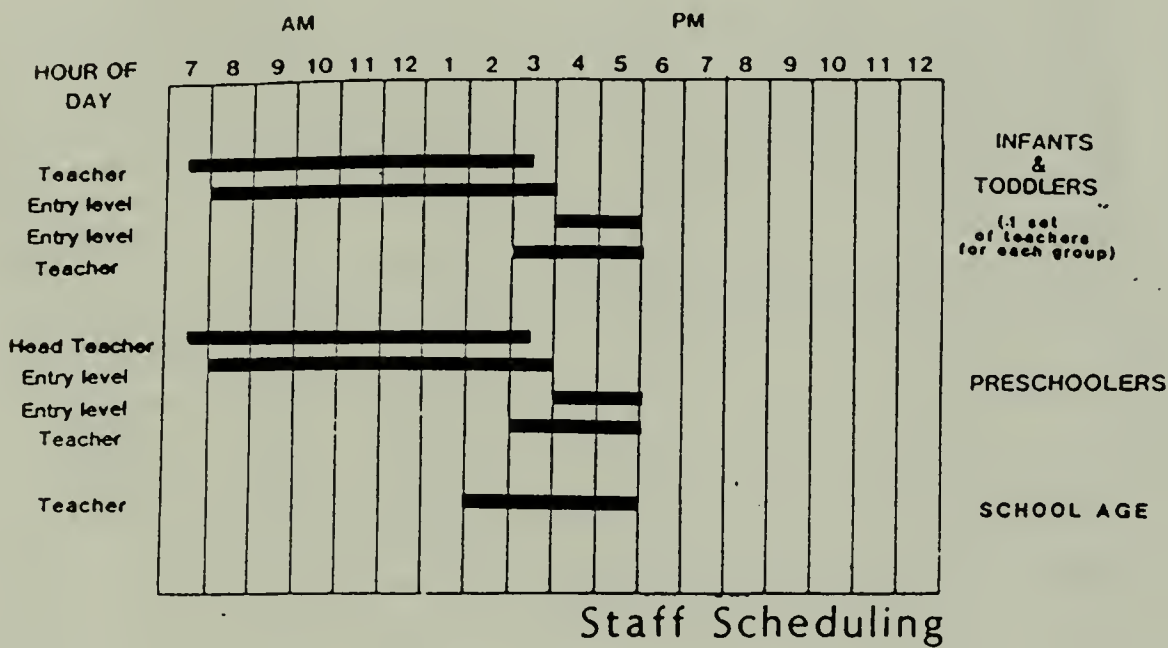
## Operating Costs

| SALARIES               | TOTAL                | INFANTS   | TODDLERS  | PRESCHOOL |
|------------------------|----------------------|-----------|-----------|-----------|
| Entry level Teachers   | 3 1/4 @ 14,200       | 1 1/4     | 1 1/4     | 1 1/4     |
| Head Teachers          | 3 @ 17,000           | 1 1/3     | 1 1/3     | 1 1/3     |
| Director               | 1 @ 20,400           |           |           | 1         |
| Bookkeeper             | 1 @ 23,650           |           |           |           |
| Secretary              | 1/2 @ 20,000         |           |           |           |
| Substitute             | 1/2 @ 15,000         |           |           |           |
|                        | 2,840                |           |           |           |
| Total                  | \$ 185,470           | \$ 40,360 | \$ 40,360 | \$ 60,760 |
| Payroll Tax & Benefits | 46,370               | 10,000    | 10,090    | 15,190    |
| Total Payroll          | \$ 231,840           | \$ 50,450 | \$ 50,450 | \$ 75,950 |
| Consultants            | 1,500                |           |           |           |
| License & Fees         | 30                   |           |           |           |
| Insurance              | 36 @ \$70.00 = 2,520 |           |           |           |
| Educational Supplies   | 4,100                |           |           |           |
| Other Supplies         |                      |           |           |           |
| Paper                  | 1,250                |           |           |           |
| Maintenance            | 350                  |           |           |           |
| Office                 | 500                  |           |           |           |
| Medical                | 125                  |           |           |           |
| Kitchen                | 250                  |           |           |           |
| Diapers                | 950                  |           |           |           |
| Food                   | 20,000               |           |           |           |
| Staff Development      | 500                  |           |           |           |
| Miscellaneous          |                      |           |           |           |
| Printing               | 500                  |           |           |           |
| Postage                | 300                  |           |           |           |
| TOTAL                  | \$ 264,715           |           |           |           |



# SCHOOL AGE ADDED 46 Children

This scenario consists of essentially a basic level of care with an after school segment for 10 children added. The most significant changes are the addition of a director (required by 7.06 (10)(a) for centers over 40 children) and a half time teacher for the afterschool children. The rest of the staff shows a slight shift in balance away from entry level and to teachers. Otherwise, items are identical except in the few cases where supplies need to be increased to handle the extra children.







# SCHOOL AGE ADDED

## Operating Costs

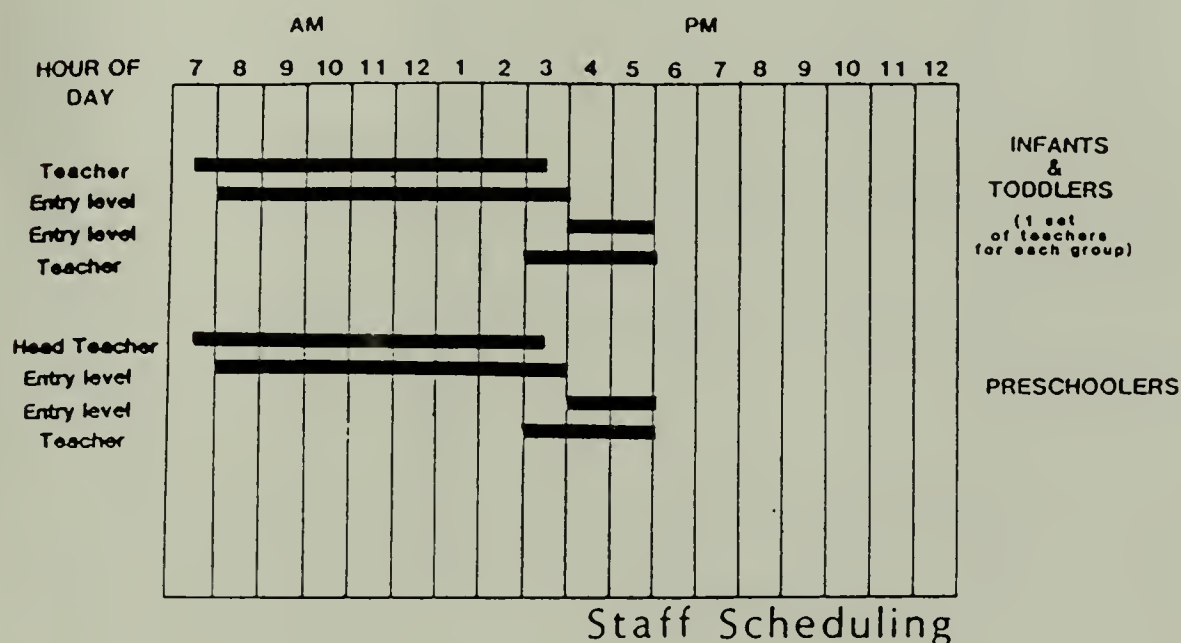
| SALARIES               | TOTAL                | INFANTS   | TODDLERS  | PRESCHOOL | AFTER SCHOOL |
|------------------------|----------------------|-----------|-----------|-----------|--------------|
| Entry level Teachers   | 3 3/4 @ 11,340       | 1 1/4     | 1 1/4     | 1 1/4     |              |
| Head Teachers          | 3 1/2 @ 13,600       | 1 1/3     | 1 1/3     | 1 1/3     | 1/2          |
| Director               | 1 @ 15,875           |           |           | 1         |              |
| Bookkeeper             | 1 @ 19,278           |           |           |           |              |
| Secretary              | 2,268                |           |           |           |              |
| Substitute             | \$ 127,414           | \$ 32,265 | \$ 32,265 | \$ 34,538 | \$ 6,800     |
| Total                  |                      |           |           |           |              |
| Payroll Tax & Benefits | 31,853               | 8,066     | 8,066     | 8,634     | 1,700        |
| Total Payroll          | \$ 159,267           | \$ 40,331 | \$ 40,331 | \$ 43,172 | \$ 8,500     |
| Consultants            | 2,000                |           |           |           |              |
| License & Fees         | 30                   |           |           |           |              |
| Insurance              | 46 @ \$70.00 = 3,220 |           |           |           |              |
| Educational Supplies   | 4,000                |           |           |           |              |
| Other Supplies         |                      |           |           |           |              |
| Paper                  | 1,250                |           |           |           |              |
| Maintenance            | 350                  |           |           |           |              |
| Office                 | 300                  |           |           |           |              |
| Medical                | 150                  |           |           |           |              |
| Kitchen                | 250                  |           |           |           |              |
| Food                   | 15,000               |           |           |           |              |
| Staff Development      | 250                  |           |           |           |              |
| Miscellaneous          |                      |           |           |           |              |
| Printing               | 500                  |           |           |           |              |
| Postage                | 300                  |           |           |           |              |
| TOTAL                  | \$ 186,867           |           |           |           |              |

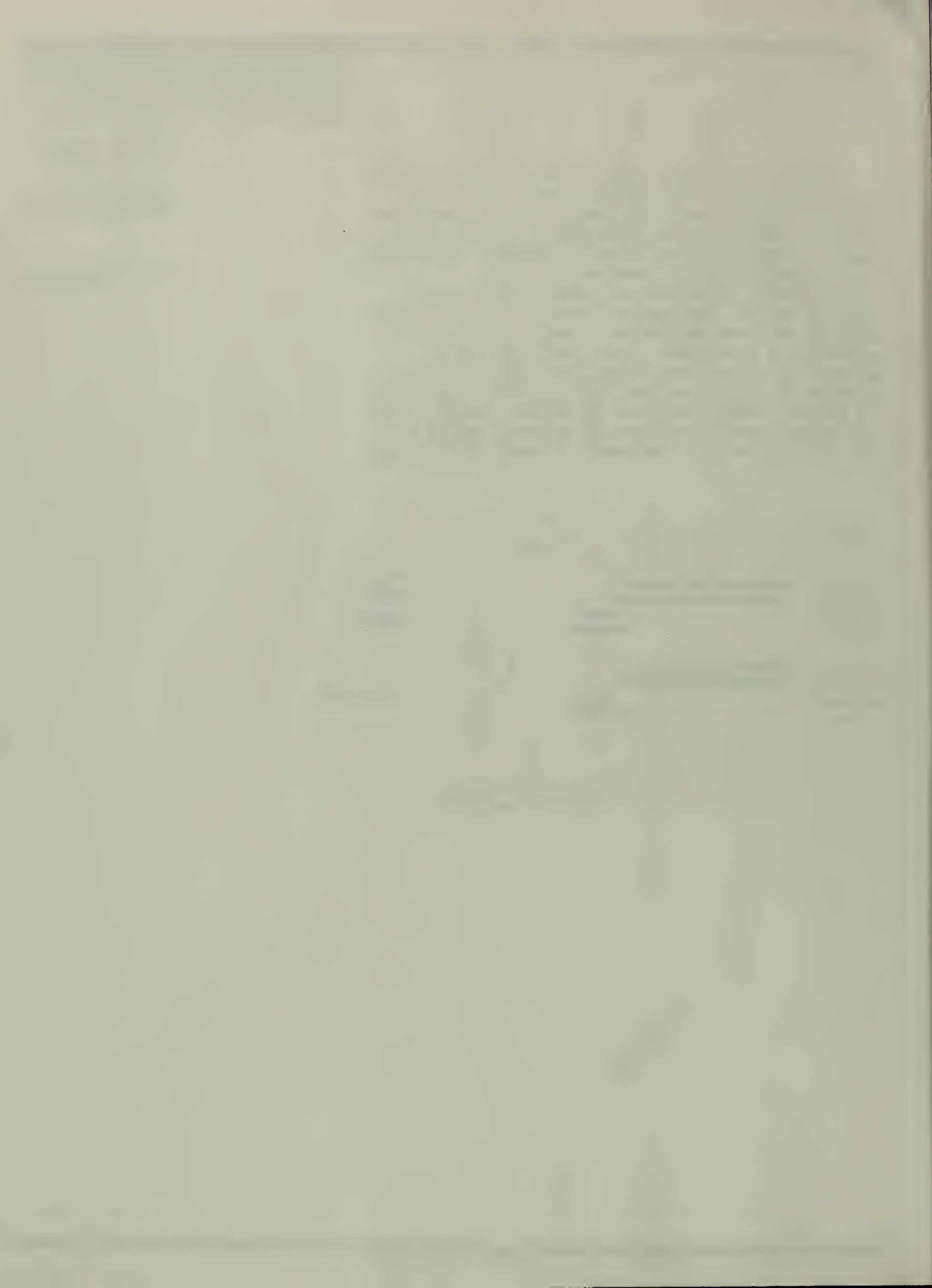


# DOUBLE MODULE

72 Children

The scenario also begins with a basic level of care and then adapts it to a double sized center. Essentially, the center is composed of two separate, 36 child centers. Such a doubling of centers could realize considerable savings if redundant components such as administration were not doubled. Unfortunately, at this basic level, this is not possible because one begins without a director (see MODEL 1) but must add one when doubling size. A secretary is also added. The result is not a savings, nor just a mere doubling in cost, but an increase of 230%. The savings in supplies and such are minimal, amounting to a little over \$2,500. The cost of two totally independent centers versus the double module version is actually about \$45,000 less.







# Operating Costs

## DOUBLE MODULE

| SALARIES               | TOTAL                | INFANTS   | TODDLERS  | PRESCHOOL |
|------------------------|----------------------|-----------|-----------|-----------|
| Entry level Teachers   | 7 1/2 @ 11,340       | 2 1/2     | 2 1/2     | 2 1/2     |
| Head Teachers          | 6 @ 13,600           | 2 2/3     | 2 2/3     | 2 2/3     |
| Director               | 2 @ 15,875           |           |           | 2         |
| Bookkeeper             | 1 @ 23,650           |           |           |           |
| Secretary              | 1 @ 15,000           |           |           |           |
| Substitute             | 4,536                |           |           |           |
| Total                  | \$ 241,322           | \$ 64,530 | \$ 64,530 | \$ 69,076 |
| Payroll Tax & Benefits | 60,330               | 16,140    | 16,140    | 17,270    |
| Total Payroll          | \$ 301,652           | \$ 80,670 | \$ 80,670 | \$ 86,346 |
| Consultants            | 2,000                |           |           |           |
| License & Fees         | 30                   |           |           |           |
| Insurance              | 72 @ \$70.00 = 5,040 |           |           |           |
| Educational Supplies   | 7,400                |           |           |           |
| Other Supplies         |                      |           |           |           |
| Paper                  | 2,000                |           |           |           |
| Maintenance            | 700                  |           |           |           |
| Office                 | 600                  |           |           |           |
| Medical                | 250                  |           |           |           |
| Kitchen                | 500                  |           |           |           |
| Food                   | 24,000               |           |           |           |
| Staff Development      | 500                  |           |           |           |
| Miscellaneous          |                      |           |           |           |
| Printing               | 500                  |           |           |           |
| Postage                | 300                  |           |           |           |
| TOTAL                  | \$ 346,072           |           |           |           |

Section  
1900

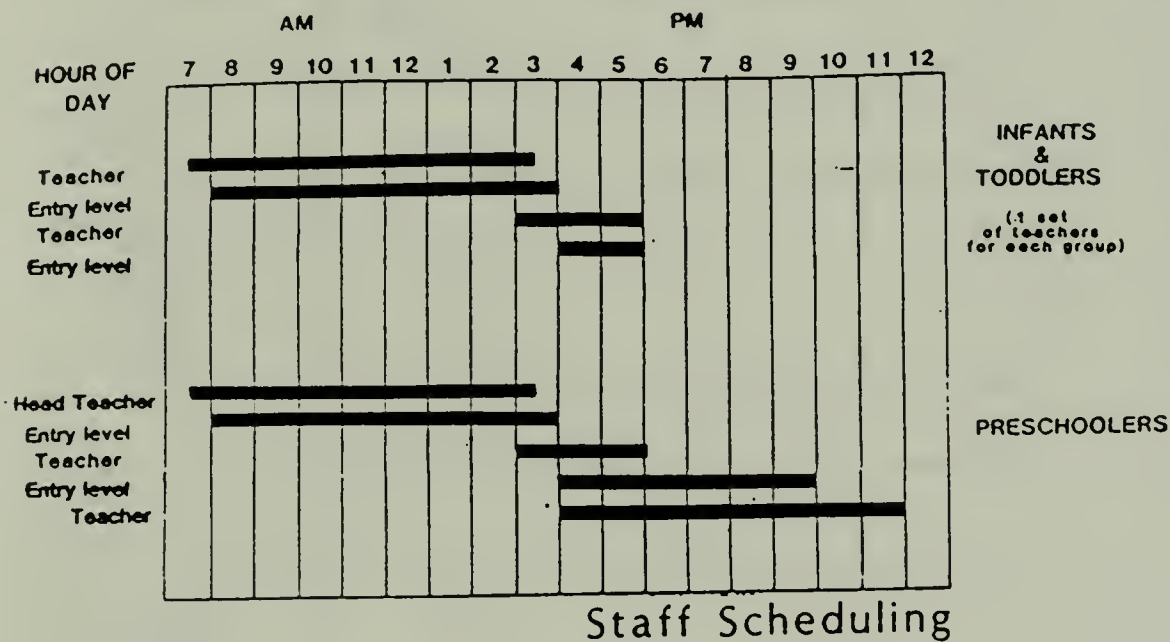
| Name            |  | Age |  | Sex |  | Occupation |  |
|-----------------|--|-----|--|-----|--|------------|--|
| John Smith      |  | 35  |  | M   |  | Farmer     |  |
| Mary Smith      |  | 32  |  | F   |  | Homemaker  |  |
| Robert Smith    |  | 10  |  | M   |  | Student    |  |
| Elizabeth Smith |  | 8   |  | F   |  | Student    |  |
| James Smith     |  | 5   |  | M   |  | Student    |  |
| Sarah Smith     |  | 3   |  | F   |  | Student    |  |
| William Smith   |  | 2   |  | M   |  | Student    |  |
| Anna Smith      |  | 1   |  | F   |  | Student    |  |
| Thomas Smith    |  | 0   |  | M   |  | Student    |  |

# DOUBLE SHIFT

51 Children

This scenario begins with a basic level of care and adapts it to two shifts serving a total of 72 children. The major distinction is the increase in staff required, which is best depicted in the staffing schedule which follows. For this size center, a director is also required. Otherwise, supply figures increase as required to serve the greater number of children.

This prototype is most adaptable to an institution which has 2-3 shifts, where employees are working all hours of the day (i.e. hospitals). Demand is lower in the evening, so the second shift is assumed to be 15 children.



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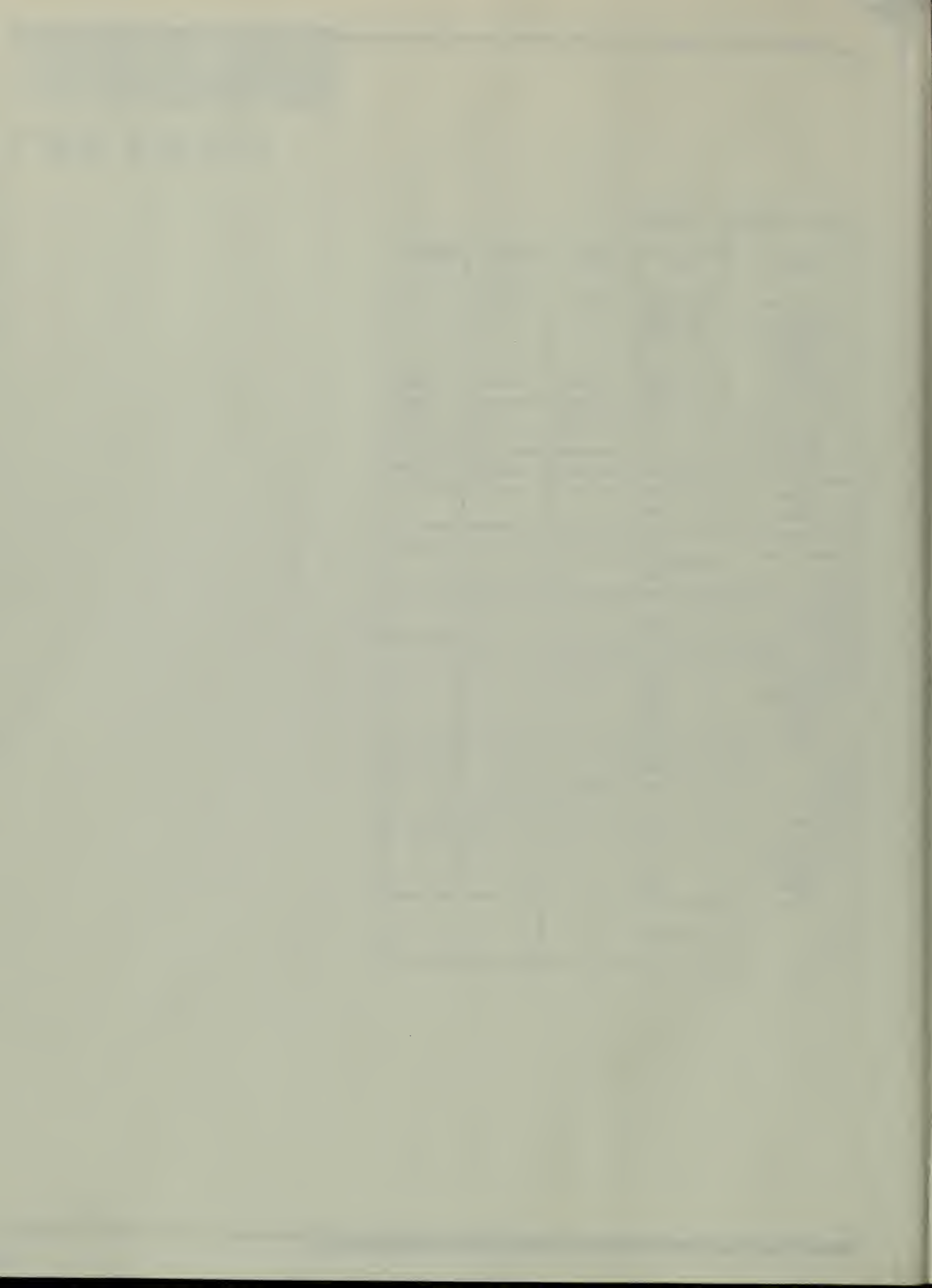




# DOUBLE SHIFT

## Operating Costs

| SALARIES               | TOTAL                | INFANTS   | TODDLERS  | PRESCHOOL |
|------------------------|----------------------|-----------|-----------|-----------|
| Entry level Teachers   | 4 1/2 @ 11,340       | 1 1/4     | 1 1/4     | 2         |
| Head Teachers          | 4 @ 13,600           | 1 1/5     | 1 1/3     | 1 1/3     |
| Director               | 1 @ 15,875           |           |           | 1         |
| Bookkeeper             | 1 @ 19,278           |           |           |           |
| Secretary              |                      |           |           |           |
| Substitute             | 3,402                |           |           |           |
| Total                  | \$ 124,707           | \$ 32,265 | \$ 32,265 | \$ 58,935 |
| Payroll Tax & Benefits | 31,177               | 8,066     | 8,066     | 14,739    |
| Total Payroll          | \$ 155,884           | \$ 40,331 | \$ 40,331 | \$ 73,694 |
| Consultants            | 2,000                |           |           |           |
| License & Fees         | 30                   |           |           |           |
| Insurance              | 51 @ \$70.00 = 3,570 |           |           |           |
| Educational Supplies   | 5,000                |           |           |           |
| Other Supplies         |                      |           |           |           |
| Paper                  | 2,000                |           |           |           |
| Maintenance            | 400                  |           |           |           |
| Office                 | 400                  |           |           |           |
| Medical                | 250                  |           |           |           |
| Kitchen                | 500                  |           |           |           |
| Food                   | 17,000               |           |           |           |
| Staff Development      | 250                  |           |           |           |
| Miscellaneous          |                      |           |           |           |
| Printing               | 500                  |           |           |           |
| Postage                | 300                  |           |           |           |
| TOTAL                  | \$ 188,084           |           |           |           |



## Summary Table

|   | MODEL I    | MODEL 11   | SCHOOL AGE<br>ADDED | DOUBLE<br>SHIFT | DOUBLE<br>MODULE |
|---|------------|------------|---------------------|-----------------|------------------|
| Salaries &<br>Related Costs             | \$ 126,670 | \$ 231,840 | \$ 159,267          | \$ 155,884      | \$301,652        |
| Total Cost                              | 150,195    | 264,715    | 186,867             | 188,084         | 346,072          |
| Salary Costs<br>as a % of<br>Total Cost | 84%        | 87%        | 85%                 | 83%             | 87%              |
| Total Cost/Child                        | 4,172      | 7,353      | 4,062               | 3,688           | 4,806            |
| Direct Salary Costs:                    |            |            |                     |                 |                  |
| Infant Care                             | 40,335     | 50,450     | 40,331              | 40,331          | 80,670           |
| Toddler Care                            | 40,335     | 50,450     | 40,331              | 40,331          | 80,670           |
| Pre School Care                         | 43,173     | 75,950     | 43,172              | 73,694          | 86,346           |
| After School Care                       |            |            | 8,500               |                 |                  |
| Indirect Cost/Child                     | 732        | 2,440      | 1,185               | 661             | 1,366            |
| Direct Cost/Child:                      |            |            |                     |                 |                  |
| Infants                                 | 5,760      | 7,207      | 5,762               | 5,762           | 5,762            |
| Toddlers                                | 4,482      | 5,606      | 4,481               | 4,481           | 4,482            |
| Pre Schoolers                           | 2,160      | 3,798      | 2,159               | 2,105           | 2,159            |
| After Schoolers                         |            |            | 850                 |                 |                  |
| Total Cost/Child:                       |            |            |                     |                 |                  |
| Infant                                  | 6,492      | 9,647      | 6,947               | 6,423           | 7,128            |
| Toddler                                 | 5,214      | 8,046      | 5,666               | 5,142           | 5,848            |
| Pre Schooler                            | 2,892      | 6,238      | 3,344               | 2,766           | 3,525            |
| After Schooler                          |            |            | 2,035               |                 |                  |
| Total Cost/Child/Month:                 |            |            |                     |                 |                  |
| Infant                                  | 541        | 804        | 579                 | 535             | 594              |
| Toddler                                 | 435        | 670        | 472                 | 428             | 488              |
| Pre Schooler                            | 241        | 520        | 279                 | 230             | 294              |
| After Schooler                          |            |            | 170                 |                 |                  |

\* All Cost per annum unless otherwise specified.

